

Claims

1. A bottle neck liner so dimensioned that it can be sealingly located within a bottle neck, the liner
5 comprising a sleeve defining a bore having an inward step, the sleeve and step being so dimensioned that, in use, the bore can sealingly accommodate the distal end region of a syringe barrel with the distal end of the syringe barrel in abutment with the inward step, the distal end region of
10 the syringe barrel being thereby located substantially within the bottle neck.
2. A bottle neck liner as claimed in Claim 1, wherein the sleeve is dimensioned to fit, in use, substantially
15 entirely within a bottle neck.
3. A bottle neck liner as claimed in Claim 1 or 2, wherein the sleeve comprises a resilient material.
- 20 4. A bottle neck liner as claimed in any preceding claim, wherein the inward step is a substantially annular inward step.
5. A bottle neck liner as claimed in any preceding
25 claim, wherein the inward step is located in the region of one end of the sleeve.
6. A bottle neck liner as claimed in any preceding claim, wherein the liner comprises an outwardly protruding
30 flange extending around at least a portion of an end of the liner.

7. A bottle neck liner as claimed in Claim 6, wherein the flange is dimensioned such that, in use, the underside thereof is capable of abutting the rim of a bottle neck into which the liner is inserted.

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8. A bottle neck liner as claimed in any preceding claim, having a cylindrical body to engage sealingly inside a bottle neck and, spaced from the body, the sleeve, wherein the body and sleeve are connected together
10 by a web of material only at one end of the body and of the sleeve; and wherein at the other end of the sleeve the inward step is located.

9. A bottle having a bottle neck in which is located
15 a bottle neck liner such that liquid cannot flow between the bottle neck liner and the bottle neck, the bottle neck liner comprising a sleeve comprising an inward step located within the bottle neck, wherein the sleeve is dimensioned such that when a syringe barrel is inserted
20 into the sleeve liquid cannot flow between the sleeve and the barrel, and wherein the inward step is so located as to prevent the syringe barrel from protruding past the step.

25 10. A bottle as claimed in Claim 9, comprising a bottle neck liner of any one of Claims 1 to 8.

11. A bottle having a bottle neck, wherein the bottle neck comprises an inward step, the inward step being
30 dimensioned to prevent the barrel of a syringe from protruding past the step when sealingly inserted into the bottle neck, in use.

12. A bottle as claimed in any of Claims 9, 10 or 11, wherein the bottle contains medicine.

13. A bottle as claimed in any of Claims 9 to 12,
5 where the bottle includes a closure member which can be secured over the bottle neck.

14. A liquid dispensing apparatus comprising a bottle as claimed in any one of Claims 9 to 13 and a syringe
10 having a plunger and a barrel which is arranged in use to be sealingly inserted into the bottle neck when an aliquot of liquid is required, the apparatus being such that when the barrel is thus inserted liquid can leave the bottle only via the syringe.

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15. A liquid dispensing apparatus as claimed in Claim 14, wherein the syringe is a flat-nosed syringe.

16. A method of dispensing the fluid from issuing
20 apparatus as claimed in Claim 14 or 15, the method comprising the steps of:

(a) providing a syringe comprising a syringe barrel which has a fluid dispensing aperture at the distal end
25 thereof;

(b) inserting the barrel into the bottle neck of the bottle until the distal end of the barrel abuts the inward step;
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(c) positioning the bottle such that liquid within the bottle contacts the aperture;

(d) effecting outward movement of a plunger of the syringe to withdraw liquid from the bottle into the barrel;

5 (e) positioning the bottle such that liquid within the bottle no longer contacts the aperture;

(f) removing the barrel from the bottle neck; and

10 (g) effecting inward movement of the syringe plunger to dispense liquid from the syringe barrel.

17. A method as claimed in Claim 16, wherein the method is a method of dispensing a liquid medicine.

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18. A bottle neck liner, bottle, liquid dispensing apparatus or method, substantially as described herein with reference to the accompanying drawings.